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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/807,047	03/23/2004	David Feygin	115-002US	4801

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EXAMINER

FRISBY, KESHA

ART UNIT	PAPER NUMBER
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3715

NOTIFICATION DATE	DELIVERY MODE
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02/27/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

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<i>Office Action Summary</i>	Application No. 10/807,047	Applicant(s) FEYGIN ET AL.	
	Examiner KESHA FRISBY	Art Unit 3715	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 December 2008.
2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24,31 and 32 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-24,31 and 32 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of Claims

After the amendment filed on 5/22/2008, claims 1-24, 31 & 32 are pending. Claims 26-30, 33, 34 & 36 were canceled.

Information Disclosure Statement

1. The information disclosure statement filed 12/4/2007 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because the Foreign Document FR2622721A is not translated. It has been placed in the application file, but the information referred to therein has not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609.05(a).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

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the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-15, 17-23 & 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bevirt et al. (U.S. Patent Number 6,705,871) in view of Rosenberg et al. (U.S. Patent Number 5,821,920).

Referring to claim 1, Bevirt et al. discloses an apparatus comprising a receiver wherein: said receiver (Fig. 2a: apparatus 25) has at least three degrees of freedom (A, B & C) that enable said receiver to move in three different ways about three different axes (column 8 line 33-column 9 line 11), wherein axes of said three degrees of freedom intersect (at point P); and said receiver receives an end effector (user object 44 or 18), wherein said end effector removably couples to said receiver (Figs. 1-3 & the associated text). *Bevirt et al. does not disclose wherein the axes of said three degrees of freedom intersect at a point that is located within the receiver.* However, Rosenberg et al. teaches wherein the axes of said three degrees of freedom intersect at a point (origin point O) that is located within the receiver (object receiving portion 702) (Fig. 7 & the associated text). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include wherein the axes of said three degrees of freedom intersect at a point that is located within the receiver, as disclosed by Rosenberg et al., incorporated into Bevirt et al. in order to extend completely through the object receiving portion.

Referring to claim 2, Bevirt et al., as modified by Rosenberg et al., discloses further comprising said end effector, wherein said end effector comprises a catheter (column 7 lines 32-35 of Bevirt et al.).

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Referring to claim 3, Bevirt et al., as modified by Rosenberg et al., discloses wherein two of said three degrees of freedom are rotational (A & B of Bevirt et al.) and one of said three degrees of freedom is translational (C of Bevirt et al.).

Referring to claim 4, Bevirt et al., as modified by Rosenberg et al., discloses further comprising pseudo skin (barrier 22 of Bevirt et al.), wherein said receiver is disposed beneath said pseudo skin (column 6 line 66-column 7 line 1 of Bevirt et al.).

Referring to claim 5, Bevirt et al., as modified by Rosenberg et al., discloses further comprising said end effector, wherein said pseudo skin (barrier 22 of Bevirt et al.) lies between said end effector and said receiver (Figs. 1-3 of Bevirt et al.), and wherein to simulate a vascular access procedure, said end effector is inserted through an opening in said pseudo skin to couple with said receiver (Figs. 1-3 & the associated text of Bevirt et al.).

Referring to claim 6, Bevirt et al., as modified by Rosenberg et al., discloses further comprising: a plurality of sensors (column 9 lines 22-25 of Bevirt et al.), wherein said sensors: monitor movement of said receiver with respect to said degrees of freedom, wherein said movement is indicative of the position and orientation of said end effector (column 12 lines 1-61 of Bevirt et al.); and generate signals indicative of said monitored movement (column 12 lines 1-61 of Bevirt et al.); and a data processing system, wherein said data processing system receives signals generated by said sensors (computer 16 of Bevirt et al.).

Referring to claim 7, Bevirt et al., as modified by Rosenberg et al., discloses further wherein said data processing system determines a position and orientation of said end

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effector based on said received signals (column 12 lines 1-61 of Bevirt et al.).

Referring to claim 8, Bevirt et al., as modified by Rosenberg et al., discloses wherein said receiver comprises a force-feedback assembly, wherein said force-feedback assembly generates a resistance to movement of said end effector (column 14 lines 48-52 of Bevirt et al.).

Referring to claim 9, Bevirt et al., as modified by Rosenberg et al., discloses wherein said force-feedback assembly comprises a motor (column 13 lines 5-13 of Bevirt et al.).

Referring to claim 10, Bevirt et al., as modified by Rosenberg et al., discloses an end effector (user object 44 or 18 of Bevirt et al.); and a movable member (linear axis member 40 of Bevirt et al.), wherein: said end effector reversibly couples to said movable member to simulate a vascular access procedure (Fig. 1 & the associated text of Bevirt et al.); and said movable member moves along a linear path (C of Bevirt et al.) in response to manipulation of said end effector (Figs. 2a, 2b, the associated text & column 9 lines 36-38 of Bevirt et al.).

Referring to claims 11-13, Bevirt et al., as modified by Rosenberg et al., discloses wherein said movable member is coupled to a cable (capstan cable drive and/or cable drive system of Bevirt et al.) (claim 11) and wherein said cable is couple to a motor (DC servo motors of Bevirt et al.) (claim 12); wherein, responsive to a control signal, said motor generates a resistance to movement of said movable member (column 14 lines 48-52 of Bevirt et al.) (Claim 13).

Referring to claim 14, Bevirt et al., as modified by Rosenberg et al., discloses further comprising a plurality of pulleys (capstan band drive mechanisms 72 of Bevirt et al.)

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disposed on a frame (apparatus 25 of Bevirt et al.); said pulleys engage said cable (Figs. 5a-5c of Bevirt et al.); and said pulleys are arranged so that a tension in said cable aligns with said linear path along which said movable member moves (Figs. 5a-5c & the associated text of Bevirt et al.).

Referring to claim 15, Bevirt et al., as modified by Rosenberg et al., discloses wherein said movable member comprises a pulley, wherein said movable member is coupled to said cable via said pulley (Figs. 5a-5c & the associated text of Bevirt et al.).

Referring to claim 17, Bevirt et al., as modified by Rosenberg et al., discloses further comprising a housing (barrier 22 of Bevirt et al.), wherein said movable member is disposed within said housing and said end effector is disposed outside of said housing (Fig. 1 & column 6 line 66 – column 7 line 1 of Bevirt et al.).

Referring to claim 18, Bevirt et al., as modified by Rosenberg et al., discloses further comprising pseudo skin, wherein said pseudo skin is substantially co-planar with a surface of said housing (Fig. 1 of Bevirt et al.).

Referring to claim 19, Bevirt et al., as modified by Rosenberg et al., discloses a frame (apparatus 25); an arrangement (gimbal apparatus 38) for providing two orthogonal axes of rotation (A & B) for said frame, wherein said frame is coupled to said arrangement (Figs. 1-3); and a movable member (linear axis member 40), wherein: said movable member receives an end effector during a vascular access procedure (Figs. 1-3); said movable member moves along a linear path in a region defined by said frame (Figs. 2A & 2B); and said linear path intersects said two orthogonal axes of rotation of said frame (Fig. 2a, 2b & the associated text). *Bevirt et al. does not disclose said linear*

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path intersects said two axes of said frame at a point that is positioned in said frame.

However, Rosenberg et al. teaches said linear path intersects said two axes of said frame at a point that is positioned in said frame (Fig. 7 & the associated text). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include said linear path intersects said two axes of said frame at a point that is positioned in said frame, as disclosed by Rosenberg et al., in order to extend completely through the object receiving portion

Referring to claim 20, Bevirt et al., as modified by Rosenberg et al., discloses further comprising a force-feedback assembly, wherein said force-feedback assembly is coupled to said movable member, and wherein said force-feedback assembly imparts a force that resists forward motion of said movable member by said end effector (column 14 lines 48-52 of Bevirt et al.).

Referring to claims 21-23, Bevirt et al., as modified by Rosenberg et al., discloses wherein said force-feedback assembly comprises: a motor (DC servo motors of Bevirt et al.); and a cable, wherein said cable is coupled to said motor (capstan cable drive and/or cable drive system of Bevirt et al.) (Claim 21), wherein said movable member includes a rolling-contact element, wherein said cable is coupled to said rolling-contact element (Figs. 5a-5c & the associated text of Bevirt et al.) (Claim 22) and further comprising a counterbalance (48a & 48b of Bevirt et al.), wherein said counterbalance is coupled to said frame (Fig. 2a of Bevirt et al.) (Claim 23).

Referring to claim 31, Bevirt et al. discloses wherein said receiver is gravitationally balanced (gravity holds receiver in position).

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5. Claims 16, 24 & 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bevirt et al./Rosenberg et al..

Referring to claim 16, Bevirt et al./Rosenberg et al. discloses said movable member, and wherein said end effector couple to said movable member (Fig. 1-3 & the associated text of Bevirt et al.). Bevirt et al. does not explicitly state wherein said movable member comprises a magnet, and wherein said end effector couples to said movable member via said magnet.

At the time the invention was made, it would have been obvious matter of design choice to a person of ordinary skill in the art to have said movable member comprise a magnet and have said movable member connected to said end effector by a magnet because Applicant has not disclosed that having adaptive architecture on a second computer provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Bevirt et al./Rosenberg et al. system, and applicant's invention, to perform equally well with either the extending through the remote pivot point P taught by Bevirt et al. or the claimed wherein said movable member comprises a magnet, and wherein said end effector couples to said movable member via said magnet because both components would perform the same function connecting the two components together.

Therefore, it would have been prima facie obvious to modify Bevirt et al./Rosenberg et al. to obtain the invention as specified in claim 16 because such a modification would have been considered a mere design consideration which fails to patentably distinguish over the prior art of Bevirt.

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Referring to claim 24, Bevirt et al./Rosenberg et al. discloses pseudo skin (barrier 22 of Bevirt et al.); and a receiver (apparatus 25 of Bevirt et al.) for coupling to an end effect (user object 44 or 18 of Bevirt et al.), wherein: a said end effector is coupled to said receiver (Figs. 1-3 & the associated text of Bevirt et al.); said receiver is disposed beneath and at least partially covered by said pseudo skin (column 6 line 66-column 7 line 1 of Bevirt et al.); and said receiver has no offset degrees of freedom (A-D, Figs. 2a, 2b & the associated text of Bevirt et al.). Bevirt et al. does not explicitly state a magnetic force used for coupling.

At the time the invention was made, it would have been obvious matter of design choice to a person of ordinary skill in the art to have a magnetic force used for coupling because Applicant has not disclosed that having adaptive architecture on a second computer provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Bevirt et al./Rosenberg et al. system, and applicant's invention, to perform equally well with either the extending through the remote pivot point P taught by Bevirt et al. or the claimed magnetic force used for coupling because both components would perform the same function connecting the two components together.

Therefore, it would have been prima facie obvious to modify Bevirt et al./Rosenberg et al. to obtain the invention as specified in claim 16 because such a modification would have been considered a mere design consideration which fails to patentably distinguish over the prior art of Bevirt.

Referring to claim 32, Bevirt et al., as modified by Rosenberg et al., discloses further

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comprising said end effector (user object 44 or 18), wherein, until coupled to said receiver by a user, said end effector is disposed above said pseudo skin (barrier 22 & Figs. 1-3 & the associated text of Rosenberg et al.).

Response to Arguments

6. Applicant's arguments, see pages 7 & 8 of the Remarks, filed 12/8/2008, with respect to Objections to the Specification have been fully considered and are persuasive. The objection of the Specification has been withdrawn.

7. Applicant's arguments with respect to claims 1-24, 26-34 & 36 have been considered but are moot in view of the new ground(s) of rejection.

Citation of Pertinent Prior Art

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Menahem (U.S. Patent Number 5,142,931) teaches a 3 degree of freedom hand controller.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KESHA FRISBY whose telephone number is (571)272-8774. The examiner can normally be reached on Monday-Friday 8am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Xuan Thai can be reached on 571-272-7147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/XUAN M. THAI/
Supervisory Patent Examiner, Art Unit 3715

/K. F./
Examiner, Art Unit 3715